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ABSTRACT

The Internet is a wealth of information for researchers and educators as well as students from high school to graduate school who can access huge amounts of data via an Internet account. This paper presents basic terms and methodology for locating resources from the comfort of a personal computer, communications software, and a modem. Internet users may send personal messages using electronic mail and find useful information through mailing lists by reading the archives or asking others who read the list. One alternative to personal messages is reading messages via Usenet news, which offers a type of "bulletin board" service where messages that are posted can be accessed when the user initiates. Information placed on a host computer which is intended for public view can be accessed by such protocols as ftp (file transfer protocol), telnet, gopher, and world wide web. Appendices provide a list of educational resources on the Internet, including AERA (American Education Research Association) and IECC (International Exchange Classroom Connection) mailing lists, the World Wide Web, and addresses for Usenet newsgroups and gopher. (Author/AEF)

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The Internet: A Powerful Resource for Educators

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The Internet:
A Powerful Resource for Researchers

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Abstract The Internet is a wealth of information for all researchers and educators are no exception. Internet users may find useful information through mailing lists by reading the archives or asking those who read the list. Usenet News may provide similar information and not require as much of a commitment from the "visitor". Information is available for public view and can be accessed by such protocols as ftp, telnet, gopher, and the World Wide Web. Some education-related sources are provided.

One of the most obvious conclusions many educators make when they see the features of having access to the Internet is the tremendous potential for research it has. Students from high school to graduate school can access huge amounts of data via an Internet account. This paper will present basic terms and methodology for located resources from the comfort of a personal computer, communications software, and a modem.

The Internet is merely a network of international host computers. Host computers are large computers which can provide individuals with a personal account. Via telephone lines, data can be sent from one computer to another. Each host computer can receive information from or forward information to individual accounts. Because of this configuration, individuals may send personal mail to each other within minutes from one country to another, thousands of people from all over the world may take part in a conversation on a topic, and individuals may "visit" locatjons to view information placed on a computer for the general public. Each of these will be discussed further.

The first example, sending personal messages, is known as using email, or electronic mail. The sender and the receiver must have accounts housed on a computer. Once a sender composes a message, it is sent to the host computer

who forwards it via phone lines to the receiver's computer, who places it in the receiver's account.

In the second example, an Internet user can be a participant in a mailing list which enables the user to participate in a conversation which others who share an interest. A mailing list is first created by an Internet user, the owner, who determines the topic of the list. Two addresses are established, the first of which is the subscription address. Any other Internet users who wish to participate in the discussion send a message to this address. The mailing list software is programmed to add this person to the list when certain words appear, such as subscription commands. Once added to the list, subscribers are given the second address, known as the list address. Messages sent to this address will be distributed to everyone on the list.

For example, to subscribe to a mailing list housed at Enormous University to discuss the campus issues, one sends a message to the listserve address. The message send merely contains the words, "subscribe campus" (the name of the list) and is then followed by the subscribers name. (If the Internet user typically has a "signature" or a line of information that always appears at the bottom of a message, this should be turned off when sending to a listserve. A message sent to a listserve is read by a computer program, not a human, so any other words besides the expected ones may result in an error.) A confirmation message is returned by the host computer of the list which contains valuable information regarding some of the other commands that may be sent to the listserve address besides "subscribe".

The computer running the mailing list software usually keeps archives of all messages sent via the mailing list. A new subscriber will receive information regarding how to access these records. Other features that may be offered by this computer include finding the names of everyone subscribed, getting the last

posted message (especially for daily's), getting a list of all posts by week or month, and getting a file called the FAQ file (frequently asked questions). One of the most valuable commands to retain is the command to unsubscribe. Messages intended to be sent to all those who are subscribed are sent to the list address. Useful information regarding a particular topic may be acquired by subscribing to a related mailing list and then either finding this information in the archives or by asking all those who read the list by "posting" a message to the list address. List and subscription addresses of mailing lists intended to discuss topics of concern to the AERA (American Education Researchers Association) are listed in Appendix A. Also listed are the subscription addresses for the International Exchange Classroom Connection lists designed to help kindergarten teachers through college instructors find other classrooms across the world with which to communicate or collaborate.

Account holders of any host computer who wish to locate a national list may do so by doing a search on the topic area. To do this, one may simply send a message to: listserv@listserv.net. The text of the message should contain:

list global /[topic]

In place of [topic], the user may place any search term on which to search. After sending the message, the listserve will return a message containing the subscription information for any mailing lists that contain the search term in the title or in the short description of the mailing list. It must be noted that some mailing lists are housed on other host computers run by mailing list software other than "listserv". ("Majordomo" software would be an example.) The listserve search described above will not render the names of mailing lists housed on these other systems. Also, sending the message, "list global" will return a message containing the names of all lists that exist. This message will require over three hundred kilobytes of memory.

New subscribers should beware of high traffic on certain lists. This refers to large amounts of messages that appear in a short amount of time and take up account space. One alternative to this situation is reading messages via Usenet News. As opposed to a mailing list in which the messages posted appear in a user's personal account, Usenet News offers a type of "bulletin board" service where messages that are posted can be accessed when the user initiates. Host computers that provide Usenet News access each determine how many day's worth of messages will be able to be accessed. An Internet user must contact the system operator or related staff of the host computer to determine if Usenet News is available and, if so, how to access it. Education-related Usenet groups are displayed in Appendix B.

Lastly, users can access information placed on a host computer which is intended for public view. The Internet user must first determine the protocol in which he/she will access the information. Protocols include: finger, lynx, telnet, ftp, gopher, and http. Finger and lynx are two protocols not generally available to most users.

Telnetting allows a user to "dial" another computer and a service via the user's host computer. Therefore, users typically use this service to dial into other computers that would otherwise require a long-distance call. Once a connection is established, providing a user identification and password or usually required. Often, one may register for these during the first connection, if the service is opened to the public.

FTP stands for "file transfer protocol" and is a less user-friendly protocol than the others. All ftp files (archives) can be searched using a search driver known as "archie". Once locating and accessing an ftp site, identification by inputting a user identification is typically required and the user must know the appropriate commands to transfer documents into his/her account.

Gophering (created by the University of Minnesota Gophers, whose team mascot is the gopher) allows you to access a document by first viewing it on the screen. Small amounts of data can be jotted down and larger documents can be saved into one's account for later printing. Most screens will have options which will take the user to other host computers housing information which may be useful to the visitor. Searches of gopher files can be done with a search driver known as "Veronica" (the cartoon companion of "archie"). Examples of documents that can be found via gopher are the US Department of Education's Goals 2000, books, recipes, and pi to some thousand places. With access to a gopher server, anyone or any large organization can house similar information on a gopher home page. Each gopher site is identified by an address. Most computer systems allow a user to search for a site, to go directly to a inputted address, or to locate a site by narrowing the geographical location. Examples of education-related gopher sites include: gopher.ed.gov (The U.S. Department of Education), ericir.syr.edu (Ask Eric), and chronicle.merit.edu (The Chronicle of Higher Education). Other sample addresses can be found in Appendix B.

A similar protocol is the http protocol, which is used in the World Wide Web. Via the World Wide Web, users can not only view text, but full-color graphics as well as audio and video. In order to locate useful Web sites from the millions that currently exist, users may employ the aid of search engines; "Yahoo" is a popular driver, as are "Webcrawler" and "Lycos". "Yahoo" is a directory of web pages. Besides searching on a term, the page contains a list of possible categories that, when chosen, link to lists of pages related to the topic. "Webcrawler" provides a search that is quick while "Lycos" provides one that is extensive. There are over eight million web pages that Lycos searches and the search supports Boolean connectors.

Specific World Wide Web access software is necessary for connecting to the Web. Currently, a popular one is "Netscape". Netscape is commercial software, but is available free to universities and non-profit organizations and is typically available through commercial services such as America On-Line or many university computer services.

As opposed to gophering, the World Wide Web is bridging industry, higher educational institutions, and homes. Similar to gophering, each web page is identified by an address which, when inputted at the appropriate prompt, connects the user directly to that page. A list of sample education web sources are listed in Appendix D along with the addresses of the three search engines discussed above and the addresses of other information sources.

Besides these protocols, users may dial directly or telnet to local libraries which may provide abstracts of resources, bibliographical data, and possibly even allow those with accounts to reserve books for later pick-up. Internet users may contact their local libraries for the telephone numbers that may enable their computers to access these services.

Once a researcher obtains an account, he/she must determine the type of research services available and the methods to use these. It may take some time until the methods become second nature, but the researcher will undoubtedly find that the Internet offers quick, current information and that there is very little need to leave home to do research when there is easy access to the Internet. The time taken to acquire the resources and learn the skills needed to access the jewels of the Internet is a worthy investment when considered the travel and clerical time that will forever be saved.

References

Braun, E. (1994). The Internet Directory. New York: Ballantine Books.

Dern, D. P. (1994). The Internet Guide for New Users. New York: McGraw-Hill, Inc.

Ellsworth, Jill H. (1994). Education on the Internet: A Hands-On Book of Ideas, Resources, Projects, and Advice. Indianapolis, IN: Sams Publishing.

Hahn, H. & Stout, R. (1995). The Internet Yellow Pages. Berkeley, CA: Osborne McGraw-Hill.

Hahn, H. & Stout, R. (1994). The Internet Complete Reference. Berkeley, CA: Osborne McGraw-Hill.

Kehoe, B. P. (1993). Zen and the Art of the Internet: A Beginner's Guide. Englewood Cliffs, N.J.: Prentice-Hall.

Krol, E. (1992). The Whole Internet. Sebastopol, CA: O'Reilly & Associates, Inc.

O'Leary, T. J. & O'Leary, L. I. (1996). Internet. New York: McGraw-Hill.

Silva, M. & Cartwright, G. F. (Summer, 1993). The intenet as a medium for education and educational reserach. Education Libraries. 17(2), 7-12.

Appendix A

AERA MAILING LISTS:

List	Topic
AERA-A	Division A: Administration
AERA-B	Division B: Curriculum Studies
AERA-C	Division C: Learning and Instruction
AERA-D	Division D: Measurement and Research Methodology
AERA-E	Division E: Counseling and Human Development
AERA-F	Division F: History and Historiography
AERA-G	Division G: Social Context of Education
AERA-H	Division H: School Evaluation & Program Development
AERA-I	Division I: Education in the Professions
AERA-J	Division J: Postsecondary Education
AERA-K	Division K: Teaching an Teacher Education

To subsribe, send a message to: listserv@asuvm.inre.asu.edu

In the body, type (for example) : subscribe AERA-B lynne pachnowski
(For AERA lists, the names of the lists are in caps.)
(Multiple subscriptions may be placed on multiple lines.)

List Owner: Gene V. Glass
Glass@asu.edu
College of Education
Arizona State University

IECC LISTS (International Exchange Classroom Connection):

K-12 classroom connection list:

To subscribe: send message to: iecc-request@stolaf.edu
In body, type: subscribe iecc *your name*

K-12 Internet project discussion list:

To subscribe: send message to: iecc-projects-request@stolaf.edu
In body, type: subscribe iecc-projects *your name*

Higher Ed classroom connection list:

To subscribe: send message to: iecc-he-request@stolaf.edu
In body, type: subscribe iecc-he *your name*

Appendix B

Education-Related Usenet News Groups:

k12.chat.elementary	(conversation for elem. students)
k12.chat.junior	(conversation fcr students gr. 6-8)
k12.chat.senior	(conversation for students gr. 9-12)
k12.chat.teacher	(c onversation for teachers, k-12)
k12.ed.art	(art curriculum discussion)
k12.ed.business	(business curriculum discussion)
k12.ed.comp.literacy	(computer lit. curriculum discussion)
k12.ed.health-pe	(health & phys. ed. curr. discussion)
k12.ed.life-skills	(life skills curriculum discussion)
k12.ed.math	(math curriculum discussion)
k12.ed.music	(music curriculum discussion)
k12.ed.science	(science curriculum discussion)
k12.ed.soc-studies	(social studies curriculum discussion)
k12.ed.special	(special ed. curriculum discussion)
k12.ed.tag	(talented and gifted)
k12.ed.tech	(industrial & voc. curr. disc., grades k-12)
k12.lang.art	(language arts curriculum discussion)
k12.lang.deutsch-eng	(practice with native German speakers)
k12.lang.esp-eng	(practice with native Spanish speakers)
k12.lang.francais	(practice with native French speakers)
k12.lang.russian	(practice with native Russian speakers
k12.library	(implementing tech in the library discussion)
misc.education	(miscellaneous education discussion)
misc.education.adult	
misc.education.language.english	

Appendix C

Gopher:

Sample addresses:

gopher.ed.gov	U.S. Dept. of Education
hub.terc.edu	Teacher Education Resource Center
ericir.syr.edu	AskEric (Housed at Syracuse)
chronicle.merit.edu	Chronicle of Higher Education
nysernet.org	Up-to-date U.S. educational info choose: Special Collections: Empire . . . then: School Reform and Tech . . . then: Daily Report Card News Service
nysernet.org	A Educational Listserve Guide choose: Special Collections: Internet . . . then: Guide to Educational Listservs
riceinfo.rice.edu	List of organizations that offers funding: choose: Information by Subject Area then: Grants, Scholarships and Funding
copernicus.bbn.com	A database of lesson plans, can be searched

Appendix D

The World Wide Web

Sample education sources:

http://gsn.org - Global School Network
http://www.ed.gov - U.S. Dept. of Education
http://web66.coled.umn.edu/schools
- Web 66 (Directory of k-12 schools on-line)
http://chronicle.merit.edu - Academe This Week

http://educom.edu/web/edreview.html - Educom Review
http://www.netins.net/showcase/macintosh
- Mac Educator's Page
http://www.chico.rice.edu/armadillo/Rice/K12resources.html
- Curriculum resouces by subject area
http://www.wentworth.com
- k12 information & curriculum links
http://www.gsn.org - Global School Net Organization

Searching Engines:

http://www.yahoo.com - Yahoo (A Directory of Pages)
http://www.webcrawler.com - Webcrawler (By America On-Line)
-searches the most pages
http://www.lycos.cs.cmu.edu - Lycos (By Carnegie Mellon U.)
-provides an extensive search
-supports boolean operators

Other Information Sources:

http://c.gp.cs.cmu.edu:5103/prog/webster
-Webster's Dictionary

http://www.columbia.edu/~svl2/bartlett/
- Bartlett's Familiar Quotations

http://www.ic.gov/94fact/fb94toc/fb94toc.html
- World Fact Book - 1994 CIA Edition

http://www.cnn.edu
- CNN (contains a search engine)

http://ericir.syr.edu
-AskERIC
(contains lesson plans and an ERIC search engine:
http://www.ericir.syr.edu/ERIC/eric.html)

http://www.mit.edu:8001/afs/athena.mit.edu/user/d/j/djkahle/www
/library2
- GNA Virtural Library
(contains links to numerous reference sources, online bookstores, electronic texts . . .)